What is claimed is:

1. An anti-friction bearing wherein at least one component is made of martensitic stainless steel composed of 0.60 to 0.75 % by weight carbon, 10.5 to 13.5 % by weight chromium, 1.0 % by weight or less silicon, 0.3 to 0.8 % by weight manganese, the remainder of the composition being iron and inevitably introduced impurities, containing eutectic carbide particles of 10 μm or less in diameter, having titanium and oxygen concentrations of 10 ppm or less respectively, having a hardness of HRC 58 or higher, and having less than 10 % by volume retained austenite.

2. An anti-friction bearing as claimed in Claim 1, wherein said anti-friction bearing is a rolling bearing.

3. An anti-friction bearing as claimed in Claim 1, wherein said anti-friction bearing is a sleeve bearing.

4. An anti-friction bearing as claimed in Claim 1, wherein said martensitic stainless steel has 3% or less by volume retained austenite.

5. An anti-friction bearing as claimed in Claim 1, wherein said martensitic stainless steel has less than 2% by volume retained austenite.

6. An anti-friction bearing comprising a plurality of rolling elements provided in raceway grooves formed in an inner and an outer ring; said anti-friction bearing characterized in that at least one of said inner ring and outer ring are made of martensitic stainless steel composed of 0.60 to 0.75 % by weight carbon, 10.5 to 13.5 % by weight chromium, 1.0 % by weight or less silicon, 0.3 to 0.8 % by weight manganese, the remainder of the composition being iron and inevitably introduced impurities, containing eutectic carbide particles of 10 μm or less in diameter, having titanium and oxygen concentrations of 10 ppm or less respectively, having a hardness of HRC 58 or higher, and having less than 10 % by volume retained austenite.

7. An anti-friction bearing comprising a plurality of rolling elements provided in raceway grooves formed in inner and outer rings, said anti-friction bearing having a stepped shaft having a larger diameter section and a smaller diameter section and a cylindrical outer ring, wherein an inner ring is fitted to said small diameter section, a pair of outer ring raceway grooves being formed on the inner peripheral surface of said cylindrical outer ring, inner ring raceway grooves formed respectively on the outer peripheral surface of said larger diameter section and on the outer peripheral section of said inner ring, said anti-friction bearing characterized in that said inner ring and outer ring and shaft are made of a martensite series stainless steel composed of 0.60 to 0.75 % by weight carbon, 10.5 to 13.5 % by weight chromium of 1.0 % by weight or less silicon, 0.3 to 0.8 % by weight manganese, the remainder of the composition being iron and inevitably introduced impurities containing eutectic carbide particles of 10 μm or less in diameter, having titanium and oxygen concentrations of 10 ppm or less respectively, having a hardness of HRC 58 or higher, and having less than 10 % by volume

retained austenite.

8. An anti-friction bearing as claimed in Claim 6, wherein said rolling elements are made of a high carbon chromium bearing steel.

9. An anti-friction bearing, as claimed in Claim 7, wherein said rolling elements are made of a high carbon chromium bearing steel.

10. An anti-friction bearing as claimed in Claim 6, wherein said anti-friction bearing is for a rotary support section of a computer peripheral device.

11. An anti-friction bearing as claimed in Claim 7, wherein said anti-friction bearing is for a rotary support section of a computer peripheral device.

12. An anti-friction bearing as claimed in Claim 6, wherein said anti-friction bearing is for a rotary support section of a hard disk drive device.

13. An anti-friction bearing as claimed in Claim 7, wherein said anti-friction bearing is for a rotary support section of a hard disk drive device.

14. An anti-friction bearing as claimed in Claim 6, wherein said anti-friction bearing is for a spindle motor of a hard disk drive device.

15. An anti-friction bearing as claimed in Claim 7, wherein said anti-friction bearing is for a spindle motor of a hard disk drive device.

16. An anti-friction bearing as claimed in Claim 6, wherein said anti-friction bearing is for a swing arm of a hard disk drive device.

17. An anti-friction bearing as claimed in Claim 7, wherein said anti-friction bearing is for a swing arm of a hard disk drive device.

18. An anti-friction bearing comprising a plurality of rolling elements provided in raceway grooves formed in an inner and an outer ring; said anti-friction bearing characterized in that at least one of said inner ring and outer ring are made of a martensite series stainless steel composed of 0.60 to 0.75 % by weight carbon, 10.5 to 13.5 % by weight chromium, 1.0 % by weight or less silicon, 0.3 to 0.8 % by weight manganese, the remainder of the composition being iron and inevitably introduced impurities, containing eutectic carbide particles of 10 μm or less in diameter, having titanium and oxygen concentrations of 10 ppm

or less respectively, and having a hardness of HRC 58 or higher.

19. An anti-friction bearing comprising a plurality of rolling elements provided in raceway grooves formed in inner and outer rings, said anti-friction bearing having a stepped shaft having a larger diameter section and a smaller diameter section and a cylindrical, wherein an inner ring is fitted to said small diameter section, a pair of outer ring raceway grooves being formed on the inner peripheral surface of said cylindrical outer ring, inner ring raceway grooves formed respectively on the outer peripheral surface of said larger diameter section and on the outer peripheral section of said inner ring, said anti-friction bearing, characterized in that said inner ring and outer ring and shaft are made of a martensite series stainless steel composed of 0.60 to 0.75 % by weight carbon, 10.5 to 13.5 % by weight chromium of 1.0 % by weight or less silicon, 0.3 to 0.8 % by weight manganese, the remainder of the composition being iron and inevitably introduced impurities containing eutectic carbide particles of 10 μm or less in diameter, having titanium and oxygen concentrations of 10 ppm or less respectively, and having a

hardness of HRC 58 or higher.